PENDING CLAIMS:

Please replace the claims as follows:

1. (Original) An annealing system for a semiconductor processing platform, comprising a plurality of isolated annealing chambers, each of the isolated annealing chambers comprising:

a heating plate positioned in an enclosed processing volume and configured to support a substrate thereon in a substantially face up orientation;

a cooling plate positioned in the enclosed processing volume and configured to support a substrate thereon in a substantially face up orientation; and

a substrate transfer mechanism positioned in the processing volume and configured to transfer substrates between the heating plate and the cooling plate.

2. (Original) The annealing system of claim 1, wherein the heating plate comprises a substantially planar upper substrate receiving surface having at least one vacuum chucking aperture formed therein.

3. (Original) The annealing chamber of claim 2, wherein the heating plate comprises at least one of a resistive heating element and an inductive heating element positioned in an interior portion of the heating plate below the substrate receiving surface.

4. (Original) The annealing system of claim 1, wherein the cooling plate comprises a substrate support member having at least one of a liquid cooling channel formed into an interior portion thereof and a thermoelectric cooling device positioned in an interior portion thereof.

5. (Original) The annealing system of claim 1, wherein the cooling plate comprises at least one vacuum aperture formed into an upper surface thereof.

6. (Original) The annealing system of claim 1, wherein the substrate transfer mechanism comprises a pivotally actuated robot arm having a distal substrate supporting blade positioned thereon.

7. (Original) The annealing system of claim 6, wherein the substrate support blade further comprises a plurality of inwardly facing substrate support tabs positioned below a main upper body portion of the support blade, the support tabs being positioned to support the substrate via contact with a backside of the substrate.

8. (Previously Presented) The annealing system of claim 7, wherein the heating plate and the cooling plate have a plurality of notches formed into a perimeter thereof, the plurality of notches being configured to receive the plurality of inwardly facing substrate support tabs when the robot blade is lowered toward the heating and cooling plates.

9. (Original) The annealing chamber of claim 1, wherein the plurality of isolated annealing chambers further comprise at least 3 stacked annealing chambers, each of the at least three stacked annealing chambers being fluidly separated from each other.

10. (Original) The annealing chamber of claim 1, further comprising a gas source in fluid communication with an interior volume of each of the annealing chambers, the gas source being configured to supply an inert gas to the processing volumes to maintain the oxygen content below about 100 ppm.

11. (Original) An annealing station for a semiconductor processing system, comprising:

a plurality of individual annealing chambers, each annealing chamber defining an isolated processing volume;

a heating plate positioned in the processing volume;

a cooling plate positioned in the processing volume; and

a substrate transfer robot positioned to receive a substrate from an externally positioned robot in a face up orientation and position the substrate onto the heating plate and the cooling plate in the face up orientation.

12. (Original) The annealing station of claim 11, wherein the individual processing volumes are fluidly isolated from each other.

13. (Original) The annealing station of claim 11, wherein the substrate transfer robot comprises:

a pivotally and vertically actuatable arm member; and

a blade member attached to a distal end of the arm member, the blade member having a plurality of inwardly extending substrate support tabs positioned thereon that are configured to engage a backside of a substrate.

14. (Previously Presented) The annealing station of claim 13, wherein the heating plate and the cooling plate have a plurality of vertically oriented channels formed into a perimeter of the plates, wherein the vertically oriented channels are configured to receive the inwardly extending substrate support tabs with the blade is lowered to the plane of the plates.

15. (Previously Presented) The annealing station of claim 11, wherein at least one of the heating plate and the cooling plate has a vacuum aperture formed into an upper substrate supporting surface, the vacuum aperture being configured to chuck a backside of the substrate to the respective plate.

16. (Previously Presented) The annealing station of claim 11, wherein a fluid channel is formed into an outer body portion of each of the plurality of individual annealing chambers, the fluid channel being in fluid communication with a cooling fluid source.

17. (Previously Presented) The annealing station of claim 11, wherein the heating plate is configured to heat a non-production surface of the substrate positioned thereon.

18. (Previously Presented) The annealing station of claim 11, further comprising a resistive heating element positioned in an interior portion of the heating plate.

19. (Previously Presented) The annealing station of claim 11, further comprising a sealable access door positioned in an outer body portion of the chamber.

20. (Previously Presented) The annealing station of claim 11, further comprising a vacuum source individually in communication with each of the processing volumes, the vacuum source being configured to generate a reduced pressure in each of the processing volumes.

21. (Previously Presented) The annealing station of claim 11, further comprising a processing gas supply selectively in communication with each of the annealing chambers.

22-25. (Cancelled).

26. (Previously Presented) A semiconductor processing platform, comprising:

a substrate loading station;

at least one substrate plating cell positioned in communication with the loading station;

at least one substrate cleaning cell positioned in communication with the loading station; and

an annealing station positioned in communication with the loading station, the annealing station comprising a plurality of annealing chambers, each of the annealing chambers comprising:

an enclosure forming a sealed processing volume;

a heating plate positioned in the sealed processing volume of each of the annealing chambers;

a cooling plate positioned in the sealed processing volume of each of the annealing chambers; and

a substrate transfer mechanism positioned to transfer substrates between the heating plate and the cooling plate.

27. (Previously Presented) The semiconductor processing platform of claim 26, further comprising at least one gas supply source selectively in communication with each of the sealed processing volumes, and adapted to supply a processing gas to each of the sealed processing volumes.

28. (Previously Presented) The semiconductor processing platform of claim 26, further comprising at least one vacuum source individually in communication with each of the sealed processing volumes, the vacuum source being configured to generate a reduced pressure individually in each of the processing volumes.

29. (Previously Presented) The semiconductor processing platform of claim 26, wherein the plurality of the annealing chambers are positioned in vertically stacked configuration.